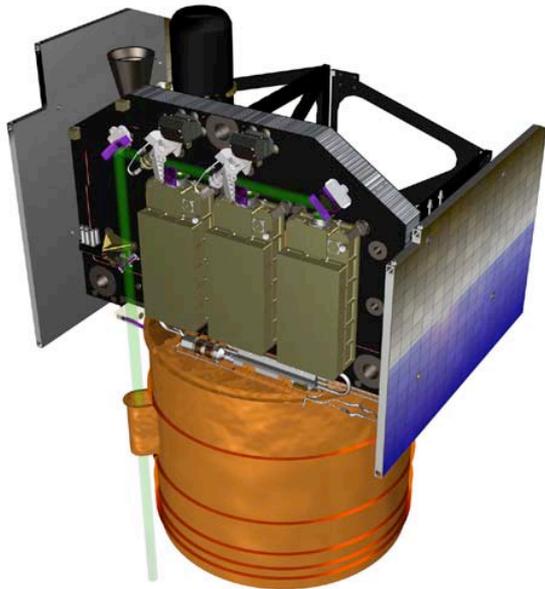




- NASA mission
- New geodetic tool to support multidisciplinary studies, including cryosphere, atmosphere, hydrology
- ICESat operated in near repeat ground track
 - Orbit maneuvers ~ 8-10 days
 - Off-nadir pointing at reference ground track in polar regions



- Three lasers to meet mission lifetime
- 1064 nm surface altimetry; 532 nm atmospheric backscatter
- Laser characteristics
 - Divergence illuminates ~70 meter spot on surface
 - 40 Hz pulse repetition rate
 - 170 meter spot separation
- Laser #1
 - 36 days in Feb-Mar 2003 (8-day repeat orbit; 4+ cycles completed)
- Laser #2
 - 56 days in Sept-Nov 2004
 - One 8-day repeat cycle
 - 48 days of 91-day repeat cycle
 - 33 days in Feb-Mar 2004 (91-day repeat)
 - 33 days started May 18 (91-day repeat)
- Laser #3
 - Operate in Fall 2004
- As of May 20, 2004:
 - 125 days of laser operation
 - 425 million laser shots
- SLR
 - measurements from: MLRS, GSFC, Zimmerwald
 - Tracking restrictions (track when elevation is <math><70^\circ</math>)